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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/720,582	11/24/2003	Yakov E. Kutsovsky	02019CON	5049

7590 02/08/2006

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EXAMINER

COOKE, COLLEEN P

ART UNIT	PAPER NUMBER
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1754

DATE MAILED: 02/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/720,582

Applicant(s)

KUTSOVSKY, YAKOV E.

Examiner

Colleen P. Cooke

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01 August 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11/24/03 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 12/22/03, 8/1/05.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### ***Drawings***

The drawings are objected to because the sole figure is labeled “Figure 1”. Where only a single view is used in an application to illustrate the claimed invention, it must not be numbered and the abbreviation “FIG. ” must not appear.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Rejections - 35 USC § 102 and 35 USC § 103***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 7-9, 13-18, 20, and 23-30 are rejected under 35 U.S.C. 102(b) as being anticipated by WO 90/10596.

WO 90/10596 teaches the production of a silica fume powder by oxidation of a silica precursor in a flame and combustion (page 4, lines 8-15) wherein the precursor along with oxidant such as oxygen and supplemental methane or hydrogen are introduced into a burner (page 7, lines 12-15) via a nozzle and are combusted. WO 90/10596 teaches specific examples using octamethylcyclotetrasiloxane (Examples 1, 3-7) and decamethylcyclopentasiloxane (Example 2) and using specific nozzle types (i.e. bi-fluid, etc.).

With respect to claims 25-30, the product claimed therein appears to be met by the teachings of WO 90/10596 because WO 90/10596 teaches the claimed process and therefore would appear to inherently teach the product that results from that process. The product of WO 90/10596 would appear to inherently meet the claims regardless of whether the specific formula disclosed is taught by the reference.

Claims 1, 2, 6-9, 13-16, 18, 19, and 23-30 are rejected under 35 U.S.C. 102(b) as being anticipated by Lewis et al. (5075090).

Lewis et al. teaches a process of preparing a metal oxide by introducing a precursor which can be mixed with a carrier into a combustion zone and combusting in support of a gas to produce the particles (see abstract). Lewis et al. teaches that the preferred precursor materials are organometallic compounds wherein the R groups are alkyl, alkoxide, or mixed alkyl or alkoxide and especially those with 1-6 carbons (Column 3, lines 7-23), wherein the carrier can be kerosene or alcohols (Column 3, lines 46-57) and wherein the precursor and carrier are introduced through a nozzle to effect atomization into a combustion zone and may also be admixed with air or pure oxygen (Column 4, lines 11-20). Lewis et al. further teaches specifically that dimethyldimethoxysilane can be used and that it can be used in conjunction with an organometallic aluminum compound (aluminum triethyl; see Example 5 in Column 7). Lewis et al. teaches that the reaction is cooled on the walls of a cooling tube (Column 5, lines 21-24 and examples).

With respect to claims 25-30, the product claimed therein appears to be met by the teachings of Lewis et al. because Lewis et al. teaches the claimed process and therefore would appear to inherently teach the product that results from that process. The product of Lewis et al. would appear to inherently meet the claims regardless of whether the specific formula disclosed is taught by the reference.

Claims 10-12 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Lewis et al. (5075090).

Lewis et al. teaches the process of claims 1 and 9 as described above. In particular, Lewis et al. teaches that the preferred precursor materials are organometallic compounds wherein the R groups are alkyl, alkoxide, or mixed alkyl or alkoxide and especially those with 1-6 carbons (Column 3, lines 7-23), and further teaches specifically that dimethyldimethoxysilane can be used and that it can be used in conjunction with aluminum triethyl (see Example 5 in Column 7). The disclosure of Lewis et al. makes numerous references to the use of aluminum triethyl and combined with the general teachings wherein the R groups of the precursors especially have 1-6 carbons, it would appear that this teachings is sufficient to anticipate at least the claimed precursor trimethyl aluminum since trimethyl aluminum is just the lower adjacent homolog of triethyl aluminum. However, should this teaching not be sufficient to anticipate the claims limitations, the claimed precursors would at least be obvious in view of the above cited teachings of which organometallic precursors are preferred.

Claims 1-3, 7-10, 13-14, 17-18, 20, and 25-30 are rejected under 35 U.S.C. 102(b) as being anticipated by Rohr et al. (5340560).

Rohr et al. teaches a method of making fumed silica which includes feeding a silicon precursor material and oxygen and hydrogen into a combustion chamber (Column 2, lines 10-27). Rohr et al. teaches that the precursor may be silanes or organosilanes (Column 2, lines 27-33). Rohr et al. teaches the use of pre-heated air (Column 3, line 29) and also that air is used to quench (Column 3, lines 40-41).

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With respect to claims 25-30, the product claimed therein appears to be met by the teachings of Rohr et al. because Rohr et al. teaches the claimed process and therefore would appear to inherently teach the product that results from that process. The product of Rohr et al. would appear to inherently meet the claims regardless of whether the specific formula disclosed is taught by the reference.

Claims 1-6 and 13-24 are rejected under 35 U.S.C. 102(e) as being anticipated by Hung et al. (6887566).

Hung et al. teaches (Column 2, lines 7-53 generally) the production of metal oxide (ceria) by atomizing a ceria precursor which may be mixed with an alcohol (Column 2, lines 55-59) into a high temperature reaction zone such as a flame which can be made from a mix of fuel such as hydrogen or methane and oxidant such as air or oxygen (Columns 3-4, lines 66-14) to form the metal oxide particles (see also Column 4, lines 47-55) and that the product can be quenched with a cooling gas, atomizing liquid, or through cooling tubes (Column 5, lines 6-10). Hung et al. also teaches that any of several well-known atomizing means can be used at various locations (Columns 3-4, lines 49-17).


### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Colleen P Cooke whose telephone number is 571-272-1170. She can normally be reached Mon.-Thurs. 8am-6:30pm.

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If attempts to reach the examiner by telephone are unsuccessful, her supervisor, Stan Silverman can be reached at 571-272-1358. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Colleen P Cooke  
Primary Examiner  
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